IN THE CLAIMS:

1. (Currently Amended) A method for fabrication a semiconductor device, comprising:

forming a barrier conductor layer on a substrate;

exposing said barrier conductor layer to a first gas atmosphere containing ~~a reducing gas and free of plasma~~ a hydride gas at an elevated substrate temperature;

forming, after said exposing said barrier conductor layer to said first gas atmosphere, a metal film on said barrier conductor layer by a CVD process; and

exposing said metal film to a second gas atmosphere at an elevated substrate temperature.

2. (Currently Amended) A method as claimed in claim 1, wherein said ~~first reducing gas atmosphere~~ hydride gas is selected from any of ~~the group consisting of~~ silane [[,]] and ammonia ~~and hydrogen~~.

3. (Previously Presented) A method as claimed in claim 1, wherein said exposing said barrier conductor layer to said first reducing gas atmosphere is conducted at a temperature between 250°C and 500°C.

4. (Previously Presented) A method as claimed in claim 1, wherein said second gas atmosphere includes hydrogen and/or nitrogen.

5. (Previously Presented) A method as claimed in claim 1, wherein said step of exposing said metal film to said second gas atmosphere is conducted at a temperature between 250°C and 500°C.

6. (Original) A method as claimed in claim 1, wherein said metal film is a Cu film.

7. (Original) A method as claimed in claim 1, wherein said barrier conductor layer is formed of any of Ta or TaN.

8. (Currently Amended) A method of fabricating a semiconductor device, comprising:

forming a barrier conductor layer of any of tungsten nitride or tantalum nitride on a substrate;

exposing said barrier conductor layer to an atmosphere ~~of a reducing gas free from plasma~~ containing a hydride gas at an elevated temperature; and

forming, after exposing said barrier conductor layer to said atmosphere containing the hydride gas ~~of the reducing gas free from plasma~~, a metal film on said barrier conductor layer by a CVD process.

9. (Currently Amended) A method as claimed in claim 8, wherein said ~~reducing gas is hydrogen~~ hydride gas is at least one of silane and ammonia.

10. (Canceled)

11. (Currently Amended) A method as claimed in claim 8, further comprising, after said ~~step of~~ forming said metal film, applying a thermal annealing process ~~applied~~ to said metal film.

12. (Currently Amended) A method as claimed in claim 11, wherein said thermal annealing process is conducted at a temperature ~~of 250-500°C~~ between 250°C and 500°C.

13. (Original) A method as claimed in claim 8, wherein said metal film is formed of Cu.

14. (Currently Amended) A method of fabricating a semiconductor device, comprising:

alternately and repeatedly forming, on a substrate, an insulating film, a barrier conductor layer of any of tungsten nitride and tantalum nitride, and a metal film, said metal film being formed by a CVD process,

wherein a step of exposing said barrier conductor film to an atmosphere ~~of a reducing gas free from plasma~~ containing a hydride gas at an elevated temperature is interposed between said step of forming said barrier conductor layer and said step of forming said metal film.

15. (Previously Presented) A method as claimed in claim 1, wherein said step of forming said barrier conductor layer is conducted by a PVD process.

16. (Previously Presented) A method as claimed in claim 1, wherein said second reducing gas atmosphere includes nitrogen.

17. (Previously Presented) A method as claimed in claim 5, wherein said step of exposing said metal film to said second gas atmosphere is conducted under a pressure of about 40 Pa.

18. (New) A method for fabrication a semiconductor device, comprising:

forming a barrier conductor layer on a substrate;

exposing said barrier conductor layer to a first gas atmosphere containing a nitrogen gas at an elevated substrate temperature;

forming, after said exposing said barrier conductor layer to said first gas atmosphere, a metal film on said barrier conductor layer by a CVD process; and

exposing said metal film to a second gas atmosphere at an elevated substrate temperature.

19. (New) A method as claimed in claim 18, wherein said exposing said barrier conductor layer to said first reducing gas atmosphere is conducted at a temperature between 250°C and 500°C.

20. (New) A method as claimed in claim 18, wherein said second gas atmosphere comprises at least one of hydrogen, nitrogen, or a combination of hydrogen and nitrogen.

21. (New) A method as claimed in claim 18, wherein said exposing said metal film to said second gas atmosphere is conducted at a temperature between 250°C and 500°C.

22. (New) A method as claimed in claim 18, wherein said metal film is a Cu film.

23. (New) A method as claimed in claim 18, wherein said barrier conductor layer is formed of any of Ta or TaN.

24. (New) A method as claimed in claim 18, wherein said forming said barrier conductor layer is conducted by a PVD process.

25. (New) A method as claimed in claim 18, wherein said second reducing gas atmosphere includes nitrogen.

26. (New) A method of fabricating a semiconductor device, comprising:

forming a barrier conductor layer of any of tungsten nitride or tantalum nitride on a substrate;

exposing said barrier conductor layer to an atmosphere containing a nitrogen gas at an elevated temperature; and

forming, after exposing said barrier conductor layer to said atmosphere containing the nitrogen gas, a metal film on said barrier conductor layer by a CVD process.

27. (New) A method as claimed in claim 26, further comprising , after forming said metal film, applying a thermal annealing process to said metal film.

28. (New) A method as claimed in claim 27, wherein said thermal annealing process is conducted at a temperature between 250°C and 500°C.

29. (New) A method as claimed in claim 26, wherein said metal film is formed of Cu.

30. (New) A method of fabricating a semiconductor device, comprising:

alternately and repeatedly forming, on a substrate, an insulating film, a barrier conductor layer of any of tungsten nitride and tantalum nitride, and a metal film, said metal film being formed by a CVD process,

wherein a step of exposing said barrier conductor film to an atmosphere containing a nitrogen gas at an elevated temperature is interposed between said step of forming said barrier conductor layer and said step of forming said metal film.